

U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
Sirenusa Condos Methyl Bromide Response - Removal Polrep



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region II

Subject: POLREP #8
Sirenusa Condos Methyl Bromide Response
A25C
Cruz Bay, VI
Latitude: 18.3282876 Longitude: -64.7915273

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Date: 4/29/2015

Reporting Period:

1. Introduction

1.1 Background

Site Number:	A25C	Contract Number:	
D.O. Number:		Action Memo Date:	
Response Authority:	CERCLA	Response Type:	Emergency
Response Lead:	EPA	Incident Category:	Removal Assessment
NPL Status:	Non NPL	Operable Unit:	
Mobilization Date:	3/20/2015	Start Date:	3/20/2015
Demob Date:		Completion Date:	
CERCLIS ID:	VIN000201665	RCRIS ID:	
ERNS No.:		State Notification:	

FPN#:

Reimbursable Account #:

1.1.1 Incident Category

An emergency removal assessment was conducted to identify potential releases or threats of releases of hazardous substances at the scene as well as other areas that may have been impacted.

1.1.2 Site Description

On March 20, 2015, EPA was notified of a potential chemical substance exposure that occurred in St. John, USVI. A family of four began vacationing during the week of March 16, 2015 at Sirenusa, a relatively new condominium complex within the Sirenusa Condominium Resort overlooking Cruz Bay, St. John. All four family members slowly started showing neurological symptoms of acute chemical exposure. The suspected chemical is methyl bromide, a highly toxic and banned pesticide. On March 20, 2015, their symptoms worsened to the point that they required medical care, and they were transported to the St. Thomas Hospital. All four patients have since been transferred to stateside hospitals. The paramedic who transported the victims later noted that she had also exhibited neurological symptoms following the transport, but her symptoms were resolved by the following day with over-the-counter medications and rest.

On March 22, 2015, the EPA On-Scene Coordinator (OSC) visited St. Thomas Hospital and spoke to the doctor who treated the four victims. The doctor confirmed that the symptoms were consistent with methyl bromide exposure and expressed interest in obtaining help from a physician with experience in treating acute methyl bromide exposure. EPA contacted the Agency for Toxic Substances and Disease Registry (ATSDR), who provided consultation with a toxicologist and is coordinating the assistance of another physician.

On March 22, 2015, the EPA OSC visited the condominium complex where the family had stayed, and confirmed with maintenance personnel that the family had stayed in unit on the second floor above a first-floor unit which had been fumigated with methyl bromide by an exterminator on March 18, 2015. It was suspected that the victims were in the unit for at least a portion of the time that the fumigation was conducted or that they returned to their unit shortly thereafter. The maintenance contact stated that other units in the complex had been fumigated by the same exterminator in October 2014 without incident.

On March 23, 2015 additional personnel were mobilized to assist in the assesment and sampling being planned for this incident, including one person from ERT, two SERAS contractors, two RST contractors, and an additional EPA OSC. EPA is working in coordination with government and local officials as well as ATSDR to complete an assessment of the condominium unit(s) where methyl bromide has been applied, additional off-site areas where methyl bromide may have been applied by the same exterminator, and any potential stockpiles of methyl bromide owned by the exterminator in order to avoid further exposures.

1.1.2.1 Location

The impacted condominium complex is located at 11 Estate Enighed, Cruz Bay, St. John 00830. It is part of a condominium complex within a suburban residential resort area.

1.1.2.2 Description of Threat

Methyl bromide (MB) is a colorless, odorless gas that was phased out of use for residential applications in 2005 and is not authorized for application in residential properties; it is still permitted for certain agricultural applications. Symptoms associated with MB poisoning include headaches, nausea, vomiting, visual disturbances, malaise, confusion, loss of coordination, slurred speech. In severe poisonings, paralysis, convulsions, coma, and death may occur. Signs of MB poisoning are often delayed and may lag from only a few minutes to 48 hours post-exposure. MB residue may take several days to off-gas. Aeration is necessary before impacted spaces can be safely accessed.

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

On March 24 through 27, 2015, EPA conducted entries into both the upper and lower units of the "J" unit where the impacted family resided. The upper "J" unit is above the lower "J" unit which was fumigated on March 18, 2015.

Air monitoring and sampling has been conducted as follows:

Upper Unit

- **Real-time air monitoring** on 3/24, 3/26 and 3/27 for VOCs
- **Four (4) grab air samples** with Summa canisters on 3/24/15 for VOC analysis (including methyl bromide): three (3) inside the unit and one (1) outside the unit to measure background concentrations
- **Eight (8) wipe samples** for pesticide and methyl bromide analyses on 3/26
- **Four (4) 12-hour time-weighted average air samples** for pesticide analysis on 3/26, including three (3) inside the unit and one (1) outside the unit to measure background concentrations
- **Four (4) 12-hour time-weighted average air samples** for methyl bromide analysis on 3/26, including three (3) inside the unit and one (1) outside the unit to measure background concentrations
- **Three (3) tap water samples**, including two (2) for VOC analysis and one (1) for methyl bromide analysis on 3/27, to potentially rule out tap water as the source of exposure

On March 24, 2015, initial real-time air monitoring in the upper unit indicated that low levels of total VOCs (up to 370 parts per billion or ppb) were present inside the unit, but background levels (up to 70 ppb) were detected outside the unit at the door and windows. On March 26 and 27, 2015, real-time VOC readings both inside and outside of the upper unit were at background levels.

On March 27, 2015, preliminary non-validated results from the upper unit grab samples were received. The results indicated that on March 24, 2015, the air inside the upper unit had contained approximately 1 part per million (ppm) MB. Preliminary non-validated results of the wipe and 12-hour time-weighted samples are expected on approximately April 3, 2015.

Lower Unit

- **Real-time air monitoring** on 3/27 for VOCs
- **Three (3) grab air samples** with summa canisters on 3/27/15 for VOC analysis (including methyl bromide): two (2) inside the unit and one (1) outside the unit to measure background concentrations
- **Five (5) wipe samples** for pesticide and methyl bromide analyses on 3/27
- **Two (2) 12-hour time-weighted average air samples** for pesticide analysis on 3/27, both inside the unit
- **Two (2) 12-hour time-weighted average air samples** for methyl bromide analysis on 3/27, both inside the unit

On March 27, 2015, real-time air monitoring in the lower unit detected sustained total VOC concentrations ranging from three to four parts per million (ppm) above background levels throughout the unit. The detections cannot be directly attributed to MB until air sampling results from the summa canisters are evaluated. Preliminary non-validated results from the lower unit grab samples are expected by approximately April 2, 2015. Preliminary results of the wipe and 12-hour time-weighted samples are expected by approximately April 7, 2015.

2. Current Activities

2.1 Operations Section

2.1.1 Narrative

Access to the Sirenusa Condominium Resort has been received and the sampling commenced on March 24, 2015. Entries into the impacted units for sampling were successfully conducted on March 24, 26 and 27, 2015. The REOC is coordinating all EPA's activities related to this incident.

2.1.2 Response Actions to Date

CURRENT INFORMATION IS IN BOLD LETTERING BELOW

All equipment and resources necessary for the sampling and assessment arrived on-site by March 26, 2015. Sampling of the impacted condominium building was initiated on March 24, 2015 and all sampling at the building has been completed the exception of tap water sampling in the lower unit for VOCs and methyl bromide.

EPA is coordinating with various agencies to manage the response and determine whether there are additional locations within the USVI where methyl bromide may have been utilized in residential settings. Initially, EPA provided the medical staff treating the impacted family with contact information for ATSDR, who then provided Poison Control Center contacts to assist with treatment. EPA has also submitted a request to ATSDR to gather contact information for any occupants which may have been exposed to methyl bromide due to fumigation in residential settings. EPA and ATSDR will coordinate with the Sirenusa condo complex management, the Virgin Islands Health Department and DPNR to determine if there have been any other potential exposures.

REOC personnel have been working with EPA ORC and Pesticides and Toxic Substances Branch (PTSB) to evaluate options for management of existing stocks of the MB, as well as the mechanisms for determining where else the fumigant may be currently stored, and how it has been utilized and/or stored in the past. Existing stocks have been identified at locations on St. Thomas and St. Croix, consisting of one cylinder at each location. The REOC is exploring various options for removal of these cylinders, potentially including staging in other locations, allow for sampling of the container, and off-site shipment to proper disposal facilities or the original suppliers.

REOC personnel coordinated with PTSB to discuss recommendations for clearing of the impacted units for re-occupancy. Input will also be sought from the fumigant manufacturer and local health department.

On Saturday March 28, 12-hour time weighted air samples for pesticides and MB were collected. Summa canister samples were taken in I lower, I upper and .A lower, and wipe samples were taken in A lower. All of the samples collected on 3/28 were shipped for analysis. Preliminary results for air samples were received on 4/3. Results for the wipe samples taken last week will be available the week of 4/6. A ventilation plan for Units J upper and lower was completed and reviewed today. Ventilation of Unit J upper is scheduled to begin tomorrow. A flyer for residents and guests of the condominium has been prepared and will be distributed 3/31. The flyer will provide information about the upcoming building ventilation.

As of 3/30 OSCs continue to work with EPA ORC and PTSB to evaluate options for management of existing stocks of MB fumigant in the USVI. This would include determining where bulk MB is stored and where it has been applied, and possibly misapplied. Existing MB cylinders have been identified at Terminix on St. Thomas (1) and at a location (1) on St. Croix. A location to restage cylinders, and options for possible shipment to the Mainland U.S. for disposal/reuse are being evaluated. The manufacturer of one cylinder of MB has agreed to supply shipping materials and papers to have the St. Thomas cylinder returned to the U.S. Mainland. Arrangements for shipment of the St. Croix cylinder are pending.

A request to ATSDR for assistance in identifying additional individuals who may have been exposed to MB fumigation in the Sirenusa condo complex was sent to ATSDR by EPA on 3/27 and forwarded to the VI DOH. A request for assistance from the ATSDR Epi-Aid Team must come directly from the VI DOH.

EPA endorsed the request on 3/27 and a formal request from the VI DOH was received by ATSDR 3/30.

R2 REOC remains the point of contact for all EPA's activities related to this incident. EPA continues to work with DPNR, the St. John Fire Department, the St. John Police Department, Terminix, ATSDR, the VI OH and the condo complex management company.

As of 4/1 venting of the two "J" units continues with opening of doors and windows and turning on the HVAC system to flush ductwork. Additional Summa canister time-weighted average samples were acquired and shipped to REAC for analysis. Support contractor personnel have been demobed as well as the initial responding OSCs who have been replaced by a third OSC mobilized to the scene on 3/30. As of 4/1 one OSC and one RST tech remain on the scene.

On 4/3 REOC personnel made contact with the supplier of the St. Croix cylinder, Cardinal Products, based in Woodland CA. Cardinal acknowledged that the MB cylinder was supplied to Terminix on St. Thomas via an affiliate company, Tri Est AG Group, Greenville NC. Contact with Cardinal Products has been made and the company agreed to ship the St. Croix cylinder back to NC as returned goods.

On 4/5 the OSC and RST acquired 4 additional Summa grab samples in each of the two "J" units. Samples will be shipped to REAC on 4/6 for analysis. In the meantime the OSC will continue to vent the two units pending receipt of results of the last round of Summa sampling. Sample results for the J upper summa samples ranged from 21.8 to 23.5 ppbv. Sample results from J lower Summa samples ranged from 81.9 to 104 ppbv

Also on 4/6 reps from ATSDR arrived on St. Thomas to initiate contact with tenants of the Sirenusa complex who occupied any fumigated unit going back to October, 2014.

On 4/7 the OSC, CID and DPNR reps overpacked and relocated the St. Thomas cylinder to a secure location on the grounds of VI DPNR Maritime Enforcement property in Krum Bay. Similarly, on 4/8 the OSC, CID and DPNR reps traveled to St. Croix and overpacked/relocated the MB cylinder there to a more secure location on USVI Waste Management property

On 4/7/2015 reps with ATSDR EPI Team arrived on St. Thomas to begin medical interviews.

On 4/7/2015 ATSDT EPI team began interviews. By 4/11/2015 7 of 8 first responders have been interviewed. Sirenusa employees to be interviewed have been identified and 3 of 7 have had their interviews and 3 have declined.

Eleven former Sirenusa guests have been identified for interviews and contact has been made with all but 3.

On 4/13/2015 1 OSC, 1 RST person and 1 SERAS tech mobed to St. Thomas to continue venting the two "J" units and to set up for additional Summa sampling and additional chemical wipe sampling.

On 4/14/2015 both "J" units were ventilated with the HVAC system in full operation. Following an 8 hour ventilation process the units were closed. 2 Summa grab samples were taken in J upper and lower.

On 4/17/2015 additional grab samples were taken in J upper and lower and in the head space of a bag of clothing

On 4/18-19/2015 chemical wipe samples were taken in both "J" units where Summa sampling will occur. Afterwards both units were closed.

On 4/18-19/2015, 4 Summa canisters were placed in "J" upper unit and 3 in "J" lower activated for a 24-hour sampling cycle. In addition a background Summa canister samples were taken at 7 different locations on St. Thomas and St. John.

On 4/20/2015 Summa cannister samples were shipped to the EPA SERAS laboratory in Edison, NJ for analysis.

On 4/27/15 an EPA OSC, ERT, and contractor support re-mobed to St. John to continue clearing activities in "J" Lower. The work will involve ventilation on the unit with high velocity fans and the use of carbon absorption units. It is expected that these activities will continue until 5/1 when the next round of 24-hour Summa canister samples will be taken. These samples will be used to assist decision-makers to clear the units for re-occupancy.

On 4/28/2015 the response team began using high-volume fans turned outwards to ventilate the lower "J" unit. It was calculated that the fans produce one total air volume change every two hours.

2.1.3 Enforcement Activities, Identity of Potentially Responsible Parties (PRPs)

One PRP has been identified and interviews have been conducted.

2.1.4 Progress Metrics

Not applicable at this time.

<i>Waste Stream</i>	<i>Medium</i>	<i>Quantity</i>	<i>Manifest #</i>	<i>Treatment</i>	<i>Disposal</i>

2.2 Planning Section

2.2.1 Anticipated Activities

In the near future both cylinders of MB will be shipped back to their respective suppliers on the Mainland for final disposition.

2.2.1.1 Planned Response Activities

On 4/26/2015 1 OSC, 1 EPA ERT, 2 SERAS, and 1 RST will move to the Site. ventilation of "J" Upper and Lower will continue, as well as the removal of porous materials from the units. High velocity fans and carbon absorption units will also be used in "J" lower. After ventilation is completed another round of 24-hour Summa canister samples will be taken. It is expected that these samples will be taken on 4/1-4/2. It is expected that preliminary data from these samples will be available mid-week, the week of 4/4.

Preparations underway to relocate the secured Methyl Bromide cylinders.

2.2.1.2 Next Steps

A complete list of residents staying in locations where MB has been applied in the Siranusa complex since October 2014 was obtained by ATSDR reps. ATSDR's Epi-Aid Team are on-going

2.2.2 Issues

No issues to report at this time.

2.3 Logistics Section

All logistical issues are being handled by EPA Region 2 in coordination with local and government agencies.

2.4 Finance Section

No information available at this time.

2.5 Other Command Staff

2.5.1 Safety Officer

Safety Officers have been identified through RST and SERAS. The EPA OSC has the responsibility for overall health and safety at the site.

2.5.2 Liaison Officer

The EPA OSCs are acting Liaison Officer with local and government officials.

2.5.3 Information Officer

3. Participating Entities

3.1 Unified Command

Unified Command is not currently being used. On March 21, 2015, DPNR referred the response to EPA.

3.2 Cooperating Agencies

EPA is coordinating efforts with various entities that have been extremely helpful in preparation for the assessment, including but not limited to:

- Department of Planning and Natural Resources
- Department of Health
- Agency for Toxic Substances and Disease Registry
- St. John Police Department
- Sirenusa Condominium Resort and Sea Glass Properties

4. Personnel On Site

Personnel are currently located in the USVI.

- EPA OSCs 1
- EPA ERT 1
- SERAS (ERT subcontractor) 2
- RST 1
- PRP representatives
- DPNR Representatives as necessary
- St. John Fire Department as necessary
- St. John Police Department as necessary

5. Definition of Terms

ATSDR: Agency for Toxic Substances and Disease Registry
DPNR: Department of Planning and Natural Resources
EPA: United States Environmental Protection Agency
ERT: Environmental Response Team
OSC: EPA On-Scene Coordinator
PID: Photoionization Detector
PRP: Potentially Responsible Party
ppm: Parts per billion
ppm: Parts per million
SERAS: Science Engineering Response & Analytical Services
RST: Removal Support Team
USVI: United States Virgin Islands
VOC: Volatile Organic Compound

6. Additional sources of information

6.1 Internet location of additional information/report

For additional information, see epaossc.org/sirenusamethylbromideresponse.

For more information about EPA's pesticide program and its requirements, visit <http://www.epa.gov/pesticides/>.

For more information on methyl bromide, visit <http://www.epa.gov/region2/methyl-bromide.pdf>.

6.2 Reporting Schedule

POLREPS will be generated as the situation warrants. Should emerging situations need to be provided to parties, spot reports or bulletins will be issued.

7. Situational Reference Materials

No information is available at this time.